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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,444	09/30/2003	Kasim Selcuk Candan	2503286-991120	7046
26379 7590 05/21/2007 DLA PIPER RUDNICK GRAY CARY US, LLP 2000 UNIVERSITY AVENUE E. PALO ALTO, CA 94303-2248			EXAMINER MIRZA, ADNAN M	
			ART UNIT 2145	PAPER NUMBER
			MAIL DATE 05/21/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/676,444	<b>Applicant(s)</b> CANDAN ET AL.	
	<b>Examiner</b> Adnan M. Mirza	<b>Art Unit</b> 2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>01/26/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carpenter et al (U.S. 6,748,416) and further in view of Kataria et al (U.S. 6,687,229).

As per claims 1,17,24 Carpenter disclosed a method of distributing streaming data in a wide area network that comprises a plurality of autonomous systems having an overlay network of proxy servers, the method comprising communicating between a proxy server and neighboring proxy servers to identify proxy servers and data paths for providing a data stream to a requester that optimize utilization of network resources based upon a predetermined relationship that characterizes tensions of said proxy servers and data paths (col. 3, lines 39-59), said communicating comprising exchanging messages with said neighboring proxy servers (col. 3, lines 26-35);

However Carpenter failed to disclose activating an identified neighboring proxy server in response to said communicating to form a portion of a hierarchical overlay network structure of interconnected proxy servers that establish optimum data paths through the overlay network for supplying the data stream to said requester.

In the same field of endeavor Kataria disclosed, "A method according to one aspect of the invention provides an algorithm for shortest path selection on a single delay metric for data network connection. Both for the pre-computation of routing tables and for computation on-the-fly, either for a flat network or hierarchical network, path delay is accumulated by an additive method or an asymptotic method (col. 3, lines 45-52).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated a method according to one aspect of the invention provides an algorithm for shortest path selection on a single delay metric for data network connection. Both for the pre-computation of routing tables and for computation on-the-fly, either for a flat network or hierarchical network, path delay is accumulated by an additive method or an asymptotic method as disclosed by Kataria in the method and system of Carpenter in order to improve the performance and availability of networked applications, multiple functionally-equivalent intermediary servers are needed to provide service to a large number of clients.

3. As per claims 2,18,25 Carpenter-Kataria disclosed further comprising dynamically reconfiguring said hierarchical structure of proxy servers in response to said communicating as conditions change to maintain said optimum utilization of resources (Kataria , col. 10, lines 8-16).

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4. As per claims 3,22 Carpenter-Kataria disclosed wherein said dynamically reconfiguring comprises changing the hierarchical network as loading changes (Kataria, col. 10, lines 27-40).

5. As per claims 4,21,27 Carpenter-Kataria disclosed wherein said dynamically reconfiguring comprises consolidating proxy servers to optimize loading on proxy servers as loading decreases (Carpenter, col. 6, lines 39-47).

6. As per claim 5 Carpenter-Kataria disclosed wherein said consolidating comprises consolidating the loads at a proxy server to optimize loading upon the loads dropping to a predetermined threshold (Carpenter, col. 6, lines 48-61).

7. As per claims 6,29 Carpenter-Kataria disclosed further comprising sending a consolidate message from a proxy server requesting consolidation of data loads to a neighboring proxy server upon data loads to said requesting proxy server dropping to a predetermined threshold (Carpenter, col. 6, lines 48-61).

8. As per claims 7,28 Carpenter-Kataria disclosed wherein said neighboring proxy server is selected to accept said data loads where consolidation of data loads at said neighboring proxy server would result in optimization of loading at such neighboring proxy server (Carpenter, col. 3, lines 39-59).

9. As per claims 8,20,30 Carpenter-Kataria disclosed wherein said dynamically reconfiguring comprises redistributing loads from said identified neighboring proxy server to

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another proxy server when the loading on said identified neighboring proxy servers reaches a predetermined threshold (Carpenter, col. 3, lines 39-59).

10. As per claims 9,26,31 Carpenter-Kataria disclosed further comprising sending a redistribute message requesting redistribution of data loads from said identified neighboring proxy server to another proxy server upon data loads at said identified neighboring proxy server reaching a predetermined threshold (Carpenter, col. 5, lines 26-49).

11. As per claim 10 Carpenter-Kataria disclosed wherein said neighboring proxy server is selected as a candidate to accept said data loads where redistribution of data loads at said neighboring proxy server would optimize loading at such neighboring proxy server (Carpenter, col. 7, lines 50-67).

12. As per claim 11 Carpenter-Kataria disclosed wherein said optimum utilization of network resources comprises optimizing network bandwidth (Kataria, col. 9, lines 26-41).

13. As per claims 12,33 Carpenter-Kataria disclosed wherein said activating comprises activating said proxy servers and paths to minimize tension (Kataria, col. 9, lines 26-41).

14. As per claims 13,32 Carpenter-Kataria disclosed wherein said predetermined relationship comprises a relationship between tension and load (Kataria, col. 9, lines 26-41).

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15. As per claims 14,23 Carpenter-Kataria disclosed wherein said optimizing comprises activating proxy servers and paths that minimize costs (Kataria, col. 11, lines 56-65).

16. As per claim 15 Carpenter-Kataria disclosed wherein said activating comprises activating proxy servers based upon the loadings of the proxy servers (Carpenter, col. 5, lines 26-49).

17. As per claim 16 Carpenter-Kataria disclosed wherein said activating comprises activating proxy servers to reduce latency in the data paths between said proxy servers and said requesters (Carpenter, col. 7, lines 50-67).

### *Conclusion*

18. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Adnan Mirza whose telephone number is (571)-272-3885.

19. The examiner can normally be reached on Monday to Friday during normal business hours. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571)-272-3933. The fax for this group is (703)-746-7239. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866)-217-9197 (toll-free).

AM

Adnan Mirza

Examiner



ANDREW CALDWELL  
SUPERVISORY PATENT EXAMINER